

# L.I.S.T.ing Newsletter

The newsletter of the Long Island Sinclair Timex group.

\*\*\* Incorporating NYTSE \*\*\*

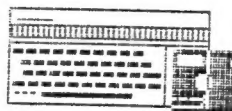


Issue:

June

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August



1989



L.I.S.T. membership for one year is \$15.00. Library tapes are available. Write to the below address for further information.

**LETTERS**

**Software Review**

**LETTERS**

**L.I.S.T.**

5 Peri Lane

Valley Stream, NY 11581



TO:

Don Lambert JAN/90  
3310 Clover Dr. S  
Cedar Rapids, IA  
52404

FIRST CLASS MAIL  
DATED MEETING NOTICE  
Please DON'T delay!!!

{1}

Expiration date is  
printed after your  
name at top of label



"Print Factory" by Byte Power. You may be aware of Byte Power Tape Magazine, started in Canada a few years back by Kris and Eric Boisvert, or you may not. Anyway, they have been producing software, games and utilities for TS-2068, And for the last 3 or 4 issues Spectrum Emulated 2068's, for the last 3 years.

During this time their programing skills have steadily improved. Even early tapes had good to very good stuff, both games and utilities. I have been using their mailing label program for about two years for our club newsletters (LIST Long Island Sinclair Timex Users Group). Also published were utilities for Larken disk drive system that I find very usefull. Back issues should be avilable for about \$6 each.

They now are producing utility software sold separately from the magazine format. The latest is PRINT FACTORY. If anyone is interested in desktop publishing on the TS-2068 then this set of programs is a must have item. The set contains 3 tapes of programs to do desktop functions and contains special programs to help with the main task. There are things like "FIRST EDITION" to produce posters, letterheads, newsletters, ads, etc. This includes a graphic design file. The "PRESS", which is a page maker that handles screens instead of graphic designs, can load and merge screens in the document and you can use four different Fonts and mix them as you wish. Also they're a "LETTER PERFECT" a proportional printing word processor for printers that do not have NLQ or redefinable fonts, it also can load a cursive character set. There is also a nifty "LABELER" program that is great for labels for such things as disks or addresses. You can have "Banner" Printed for large or small printers (TS 2040). Also there is a "Card Maker", one that really works. These are the main programs. There are also things to help you such as "QuickScreen" for the "Press", the "File Keeper" to produce your own custom libraries to be used in "First Edition" etc., the "Translator" to convert "Lemke" icons to print factory format, the "Creator" lets you manipulate or create files and 13 super sets of Fonts.

I hope this review is somewhat helpful. The bottom line is, these are super programs for our favorite computer. The only thing I would have to say is to get the most benefit from these great programs, you should really have a disk drive, then you will have to convert them from tape to disk yourself.

BYTE POWER  
1748 MEADOWVIEW AVENUE  
PICKERING, ONTARIO  
CANADA L1V3G8  
PRICE ABOUT \$25.00



Article by  
Tom Skapinski  
7 Atkinson Lane  
Coram NY 11727  
U.S.A..

## TS2068

```

10 REM THE BLACK MASK
20 RANDOMIZE
30 DIM P$(2,7)
39 REM INITIALIZE VARIABLES
40 FOR X=1 TO 7
50 LET P$(1,X)=CHR$ 32
60 LET P$(2,X)=CHR$ 128
70 NEXT X
80 LET P1=9
90 LET P2=22
100 LET U=1
110 LET Q=0
120 LET FL=0
129 REM DRAW LEFT AND RIGHT SID
ES OF MASK
130 FOR X=9 TO 22 STEP 13
140 LET P=4
150 FOR Y=2 TO 17
160 FOR Z=X-P TO X+P
170 PRINT AT Y,Z;CHR$ 143
180 NEXT Z
190 IF Y<4 THEN LET P=P+1
200 IF Y>12 THEN LET P=P-1
210 NEXT Y
220 NEXT X
230 REM DRAW WHITES OF EYES
240 LET KO=1
250 GO SUB 1000
259 REM PRINT PUPILS
260 PRINT INK 2;AT 9,P1;CHR$ 79
:AT 9,P2;CHR$ 79
270 IF P1=10 OR (P1=12 AND P2=2
5) THEN LET Q=5
280 FOR D=1 TO RND*20+0
290 NEXT D
300 LET Q=0
309 REM ERASE PUPILS
310 PRINT AT 9,P1;CHR$ 32;AT 9,
P2;CHR$ 32
319 REM BLINK SOMETIMES
320 IF P1<>9 OR RND<0.7 THEN GO
TO 380
330 LET KO=2
340 GO SUB 1000
350 FOR D=1 TO 5
360 NEXT D
370 GO TO 240
379 REM COMPUTE NEW POSITIONS (
P1,P2) FOR PUPILS
380 IF P1=6 OR P1=12 THEN LET U
=-U
390 IF FL=0 OR P1<>9 THEN GO TO
420
400 LET FL=0
410 GO TO 450
420 IF P1<>9 OR RND>0.2 THEN GO
TO 450
430 LET FL=1
440 LET U=1
450 LET P1=P1+U
460 IF FL=0 THEN LET P2=P2+U
470 IF FL=1 THEN LET P2=P2-U
480 GO TO 260
999 REM FILL EYES WITH P$(KO)
1000 PRINT AT 9,6;P$(KO);AT 9,19
:P$(KO)
1001 PRINT INK 2;AT 20,1;"THE PH
ANTOM IS WATCHING YOU"
1010 RETURN

```

## TIPS

### CASSETTE LOADING HINTS FOR TIMEX COMPUTERS

By: John Bell

The most annoying problem I have had with my T/S 1000 is not being able to load programs. If you have tried all the suggestions in the manual and still have problems, try the following techniques. Using them I get a good load on the first try nine times out of ten.

-Save your programs on a quality tape. Sixty-nine cent specials may work, but why take chances? I use any quality 45 minute normal bias cassette tape. (Maxell, Memorex, TDK, etc..)

-Try another tape recorder. Some really do work better than others. I've found the pocket size machines usually won't work.

-Keep the cassette recorder clean and demagnetized. A cassette type demagnetizer works fine. Clean the tape heads and pinch roller by hand. Perform these procedures every five to ten hours operating time.

-Run the tape recorder off batteries. Don't use Nickle-cadmium rechargeable cells. They only put out 1.2 volts compared to 1.5 for regular batteries. That's over a 1 volt drop for the average tape recorder!

-Keep the computer, tape recorder and cassette tapes at least two feet away from the television, especially when you turn it on. Electrical fields from the set can magnetize tape heads and change bit patterns on program tapes.

-The use of a tape loading device might help. See T/S HORIZONS, issue 3 for plans, or one can be purchased commercially from several sources.

TSH



# QL QL QL

```

0 REMARK ** QL COLOR CHART **
10 REMARK SUBMITTED BY ?
20 :
30 CLS
40 PAPER 0:INK 7
50 SC=20
60 CHOOSE
70 IF M=8 THEN SC=4
80 LET C$=' CONTRAST 76543210
90 WINDOW 512,256,0,0
100 PAPER 0:CLS
110 PRINT ' COLOR AXIS----->
120 LET D$=' 0 1 2 3 4 5 6 7'
130 FOR P=1 TO 4
140 PRINT D$;' '
150 NEXT P
160 FOR S=1 TO LEN(C$)
170 AT S,0:PRINT C$(S)
180 NEXT S
190 FOR N=0 TO 3
200 AT 22,12+N*SC:PRINT 'STIPPLE';' ' ;N
210 NEXT N
220 R=3
230 FOR K=0 TO 3
240 LET D=30+K
250 FOR I=0 TO 7
260 FOR J=0 TO 7
270 FILL 1
280 INK 1,J,K
290 CIRCLE (I*3)+10+0,J*5+(0/3)+20,R
300 NEXT J:NEXT I
310 FILL 0
320 NEXT K
330 DEFINE PROCEDURE CHOOSE
340 PRINT 'CHOOSE MODE (4 OR 8)'
350 INPUT M
360 MODE M
370 END DEFINE CHOOSE

```

```

00 REMARK ** THE CITY **
10 REMARK SUBMITTED BY ?
20 :
30 PAPER 0
40 WINDOW 512,256,0,0
50 CLS
60 FOR z=0 TO 50:X=RND(10):Y=RND(79):AT X,Y:PRINT ' '
70 REPEAT TOWN
80 X=RND(250)
90 Y=RND(100 TO 150)
100 W=RND(20 TO 250)
110 H=RND(100)
120 IF H<25 THEN Y=RND(5 TO 50):H=RND(150 TO 200):W=W/(RND(1 TO 30))
130 C=RND(128 TO 255)
140 BLOCK W,H,X,Y,C
150 END REPEAT TOWN

```

## ZX81 ZX81 ZX81

```

10 REM GO TO 100
35 DIM T$(5120)
40 LOAD "" DATA T$( )
100 PRINT T$
200 STOP
300 LPRINT "
P.S. This short program is
all you need to re-
enter you string for
printing. You need
LOAD only the text
string T$ and LPRINT
it."
400 PRINT "Don't forget to to
skip line 35 after
the first run."

```

```

10 REM POWER-root
20 LET C=1
30 INPUT "INPUT ARGUMENT ";a
40 LET h=a
50 INPUT "POWER OR root? ";b$
60 IF b$="P" THEN LET b$="POWE
R "
70 INPUT "VALUE OF POWER OR ro
ot ";d
80 LET g=d
90 LET e=ABS d
100 LET f=INT e
110 IF a<0 AND b$="r" AND (f/2)
=INT (f/2) THEN PRINT "ILLEGAL A
RGUMENT": STOP
120 IF b$="r" THEN LET d=1/d
130 IF b$="r" THEN LET b$="root
"
140 IF h<0 AND (f/2)<>INT (f/2)
) THEN LET c=-1
150 LET a=ABS a
160 PRINT g;" ", b$;h;" = ";a+d
*c

```



© R.J. Cunningham

## HORSE RACE

# TS2068

PRESS ANY KEY TO BEGIN!

```
1 REM !VAL \ FREE !CODE \ RET
URN ? RETURN ?( ? THEN ? ? ? THEN A
ND #UN??? >"PEEK #(?? IF RESTORE
!LEN \N ? ! ? ? RESTORE !VA
L \ FREE NEW ?>?&?
? THEN ? THEN ?STR$ RESTORE !
VAL \ ? FREE L!ST RETURN$
RETURN
2 DEF FN a()=PEEK 23635+256*P
EEK 23635+57
3 POKE 23650,30: CLS : GO SUB
15
4 POKE 23728,8: POKE 23729,3:
POKE 23723,3: RANDOMIZE USR FN
a()
5 BORDER 7: BEEP 2,15: REM "
HORSE RACE"
6 POKE 23728,20: POKE 23729,4
POKE 23723,2: RANDOMIZE USR FN
a()
7 REM PAPER 2:"PRESS ANY KEY
TO BEGIN!"
8 DRAW 255,0: DRAW 0,175: DRA
W -255,0: DRAW 0,-175: PLOT 0,83
: DRAW 255,0: PLOT 0,119: DRAW 2
55,0: PRINT AT 0,7:"© R.J. CUNN
INGHAM"
9 FOR i=1 TO 6: PRINT AT i,0
OVER 1: PAPER 2: BRIGHT 1:"
EXT 1
10 FOR i=11 TO 21: PRINT AT
i,0: OVER 1: PAPER 4: BRIGHT 1
:" NEXT i
11 REM !n 1-5 large print
12-14 opening graphics
13 REM !n 15-20 sea graphics
14 PAUSE 0: GO TO 9000
15 FOR x=0 TO 7: READ n: POKE
USR "x"+x,n: NEXT x
20 DATA BIN 000000000,BIN 000000
000,BIN 10000110,BIN 01111111,BI
N 00111110,BIN 00111100,BIN 0101
0110,BIN 10101001
30 FOR x=0 TO 7: READ n: POKE
USR "x"+x,n: NEXT x
40 DATA BIN 000000000,BIN 00011
000,BIN 00011000,BIN 10011010,BI
N 01111111,BIN 00111100,BIN 0011
1100,BIN 00111100
```

```
41 RETURN
42 REM TS2068
43 FOR x=2 TO 16 STEP 2
44 PRINT AT x,0:x/2:"_+""
45 NEXT x
47 DRAW 255,0: DRAW 0,175: DRA
W -255,0: DRAW 0,-175
48 FOR y=31 TO 159: PLOT 248,y
: NEXT y
50 FOR i=0 TO 21: PRINT AT i,0
: OVER 1: PAPER 5:" NEXT i
52 REM racina buale sound
53 READ d,p: LET d=d/18
55 IF P=999 THEN PAUSE 30: GO
TO 100
60 BEEP d,p: GO TO 53
70 DATA 3,1,2,6,2,10,3,13,1,13
,1,13,2,13,3,10,1,10,1,10,3,10,3
,6,2,10,2,6,5,1,4,69,4,69
80 DATA 3,1,2,6,2,10,3,13,1,13
,1,13,2,13,3,10,1,10,1,10,1,10,2
,1,2,1,2,1,3,6
90 DATA 999,999
100 PRINT AT 21,9: FLASH 1: BRI
GHT 1: PAPER 2: INK 9:"THEY'RE O
FF!"
199 REM horse race program
200 RANDOMIZE : LET a=3: LET b=
3: LET c=3: LET d=3: LET e=3: LE
T f=3: LET g=3: LET h=3: LET i=3
210 LET r=INT (RND*8+1)
215 BEEP .05,r: BORDER r-1
220 GO TO r+1000
1000 PRINT AT 2,a-1:"_x"
1020 LET a=a+1: IF a=32 THEN GO
TO 8100
1030 GO TO 210
2000 PRINT AT 4,b-1:"_x"
2020 LET b=b+1: IF b=32 THEN GO
TO 8100
2030 GO TO 210
3000 PRINT AT 6,c-1:"_x"
3020 LET c=c+1: IF c=32 THEN GO
TO 8100
3030 GO TO 210
4000 PRINT AT 8,d-1:"_x"
4020 LET d=d+1: IF d=32 THEN GO
TO 8100
4030 GO TO 210
5000 PRINT AT 10,e-1:"_x"
5020 LET e=e+1: IF e=32 THEN GO
TO 8100
5030 GO TO 210
6000 PRINT AT 12,f-1:"_x"
6020 LET f=f+1: IF f=32 THEN GO
TO 8100
6030 GO TO 210
7000 PRINT AT 14,g-1:"_x"
7020 LET g=g+1: IF g=32 THEN GO
TO 8100
7030 GO TO 210
8000 PRINT AT 16,h-1:"_x"
8020 LET h=h+1: IF h=32 THEN GO
TO 8100
8030 GO TO 210
8100 PRINT AT 18,4: BRIGHT 1: FL
ASH 1:".....The winner is "(r)!"
11
8105 PRINT AT (-2,0, OVER 1) BRI
GHT 1:"
```

# HORSE RACE

```

8110 FOR s=1 TO 10 BEEP .5,x-1
BEEP .5,x-5 BEEP .5,x-3 BEEP
.5,x-10: PAUSE 10 BEEP .5,x-10
BEEP .5,x-3: BEEP .5,x-1: BEEP
.5,x-5
8120 PRINT AT 21,2:"PRESS ENTER
TO RACE AGAIN!!!"
8140 PAUSE 1800: CLS : RESTORE 2
0: GO TO 1
8999 REM Set entries
9000 BEEP 1,10: CLS : BORDER 6
9005 DRAW 255,0: DRAW 0,175: DRA
W -255,0: DRAW 0,-175
9010 PRINT AT 1,7: PAPER 6: BRIG
HT 1:"TREV I RACE TRACK"
9020 PRINT TAB 1: BRIGHT 1:"Ther
e are eight horses in this" TAB
1:"race."
9030 PRINT : PRINT TAB 1: BRIGHT
1:"Pick the": PAPER 6:"TREV I "
: PAPER 7:"entry and you"TAB 1:
"HAVE YOURSELF A WINNER!"
9040 INPUT "OK! HOW MANY BETTORS
? NO MORE THAN EIGHT PLEASE!";
b$: BEEP 1,25
9042 IF CODE b$<49 OR CODE b$>56
THEN GO TO 9040
9043 IF LEN b$>1 THEN GO TO 9040
9045 PRINT
9050 FOR a=1 TO VAL b$
9052 PRINT PAPER 5;a;" Bets hor
se#:"
9053 INPUT w$
9054 IF CODE w$<49 OR CODE w$>56
THEN GO TO 9053
9056 IF LEN w$>1 THEN GO TO 9053
9057 BEEP .2,15: PRINT INK 7: PA
PER 2: BRIGHT 1;a;" BETS HORSE #
":w$
9058 NEXT a
9060 PRINT : PRINT AT 21,8: INK
7: FLASH 1: PAPER 2: FLASH 1:"AL
L BETS DOWN!"
9070 PAUSE 100: RESTORE 70: CLS
9080 GO TO 42

```

## TRY THIS

INSANE COMPUTER

(from Patrick Spars  
SYSOP-CIS-SEC. 4

This is a further expansion on  
the sound program for insane  
sounding computers.

```

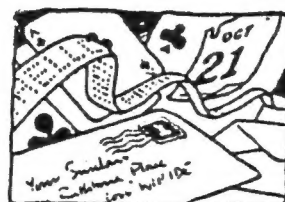
10 LET A=INT (RND*255)
11 LET A1=INT (RND*15)
12 LET A2=INT (RND*255)
13 LET A3=INT (RND*15)
14 LET A4=INT (RND*255)
15 LET A5=INT (RND*15)
16 LET A6=INT (RND*31)
100 SOUND 0,A,1,A1,2,A2,3,
A3,4,A4,5,A5,6,A6,7,56,8,15:
9,15,10,15
200 PAUSE 0
210 IF INKEY$="P" THEN GO TO
300
220 GO TO 10
300 PRINT "CHANNEL 1: FINE=
":A
310 PRINT "CHANNEL 1: COARSE=
":A1
320 PRINT "CHANNEL 2: FINE=
":A2
330 PRINT "CHANNEL 2: COARSE=
":A3
340 PRINT "CHANNEL 3: FINE=
":A4
350 PRINT "CHANNEL 3: COARSE=
":A5
360 PRINT "NOISE=":A6
370 PRINT "ENABLE=":56
375 PRINT "NOTES:"
380 PAUSE 0
390 COPY
400 CLS
410 GO TO 200
9999 SAVE "RND SOUND" LINE 1

```

What this program does is rand-  
omly set up the sound channels.  
By pressing any key but "P", you  
reset the random's. As a result,  
you can listen to the sounds,  
bypassing the ones you don't  
like. If you do hear something  
you like, just press "P" and it  
will print the current channel  
data to the screen. Press any  
key again, and it will present  
you with a hardcopy.

The practical use is obvious.  
Now, you don't have to be a wiz  
to come up with laser and  
spaceship sounds. The program  
will do it for you.

ENJOY



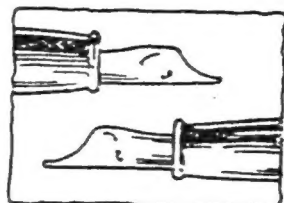
# LIST

I can't remember where I originally found this little gem so my apologies to the originator but it is such a great little graph program I had to share it.

```

2 POKE 23609,15
5 CLS : PRINT FLASH 1;"
STOP TAPE!
10 PRINT AT 12,0;" General PU
Graph Plotter
20 PAUSE 200: CLS : GO TO 9000
60 FOR U=50 TO 150 STEP 10
65 PLOT 56,U: DRAW 199,0
70 NEXT U
75 RETURN
100 REM Plotting routine
105 LET f=CODE a$(2)-96
110 FOR n=1 TO 12
120 LET x=n*16: LET z=g(f,n)
130 LET z=0: IF z>m THEN LET z=m: LET z=1
140 FOR k=1 TO 3
150 PLOT x+k+p,50
165 LET o=0: IF k=2 THEN LET o=
170 DRAW OVER o;0,z*(100-o)-z
172 IF z<=0 THEN PLOT OVER o;x+
k+p,49
175 NEXT k
180 NEXT n
190 GO TO 1000
1000 REM menu input routine
1001 POKE 23609,15
1005 LET c$="qpqp"
1010 ON ERR RESET : INPUT "enter
instruction code:";a$: IF LEN a
<2 OR LEN a>2 THEN GO TO 1010
1015 IF a$="st" THEN STOP
1020 IF a$="in" THEN GO TO 9100
1030 IF a$="cl" THEN GO TO 3000
1040 IF a$(1)="e" THEN GO TO 400
0
1050 IF a$(1)="1" OR a$(1)="2" O
R a$(1)="3" THEN GO TO 5000
1060 IF a$="sv" THEN SAVE c$ LIN
E 910
1065 IF a$="vr" THEN VERIFY c$
1070 IF a$="fl" THEN GO TO 7000
1080 IF a$="co" THEN COPY
1090 IF a$="mx" THEN GO TO 2000
1095 IF a$="nt" THEN INPUT "Titt
le:";h$: IF LEN h$>22 THEN GO TO
1095
1095 IF a$="nt" THEN PRINT AT 1,
4;" ";AT 1
,8;h$
1100 GO TO 1000
2000 REM new max routine
2010 INPUT "Enter New Max Value"
;m
3000 REM Set Up New Screen
3010 CLS
3020 BORDER 6
3040 PRINT AT 1,6;h$
3050 GO SUB 8000
3060 PRINT AT 17,1;"Plot:";AT 18
,0;"1-";AT 19,0;"2-";AT 20,0;"3-

```



# LIST

```

3090 PLOT 56,152
3100 DRAW 0,-102: DRAW 199,0
3110 GO SUB 60
3120 PRINT AT 16,7;("$(AT 17,7;m$
;AT 18,7;n$
3130 PRINT AT 3,2: BRIGHT 1;m
3140 PLOT 0,0: DRAW 255,0: DRAW
0,175: DRAW -255,0: DRAW 0,-175
3300 GO TO 1000
4000 REM Input Routine
4005 IF CODE a$(2)>103 OR CODE a
$(2)<97 THEN GO TO 1000
4007 LET st=1
4008 IF g$(CODE a$(2)-96).="
" THEN GO TO 4025
4010 IF g$(CODE a$(2)-96)<>"
" THEN INPUT "New file(Y)/Updat
e old(n):";t$: IF t$="y" THEN GO
TO 4025
4012 LET st=1
4015 FOR w=1 TO 12
4018 IF g(CODE a$(2)-96,w)=-.1 T
HEN LET st=w: GO TO 4100
4020 NEXT w
4021 GO TO 4100
4025 INPUT "Enter file name (Scha
r):";g$(CODE a$(2)-96)
4030 PRINT AT 4+CODE a$(2)-96,2;
g$(CODE a$(2)-96)
4050 PLOT 56,152: DRAW 0,-102
4060 GO SUB 60
4070 FOR b=1 TO 12
4080 LET g(CODE a$(2)-96,b)=0
4090 NEXT b
4100 FOR a=st TO 12
4110 PRINT AT 20,9;"Data for Mon
th-";a;"?"
4120 INPUT g(CODE a$(2)-96,a)
4130 IF g(CODE a$(2)-96,a)=s THE
N GO TO 4150
4140 NEXT a
4150 PRINT AT 20,8;"
4200 GO TO 1000
5000 REM Set Up for plot routine
5010 IF CODE a$(2)<97 OR CODE a$
(2)>103 THEN GO TO 1000
5030 FOR y=1 TO 12
5040 IF g(CODE a$(2)-96,y)<>0 TH
EN GO TO 5100
5050 NEXT y
5060 PRINT AT 20,9;"No file at:"
;CHR$(CODE a$(2)-32): PAUSE 100
: PRINT AT 20,9;"
GO TO 1000
5100 IF a$(1)="1" THEN LET p=p1
5110 IF a$(1)="2" THEN LET p=p2
5120 IF a$(1)="3" THEN LET p=p3
5150 LET t=(CODE a$-43)
5200 PRINT AT 17+t,2;g$(CODE a$(
2)-96)
5300 GO TO 100
7000 REM File value on screen
7005 LET c=5
7010 CLS : PRINT AT 0,10; BRIGHT
1;" File Values "
7020 FOR e=17 TO 20
7025 PRINT AT e,3;CHR$(48+e);"-
";g$(e-16)
7030 PRINT AT e,12;CHR$(52+e);"
";g$(e-12)
7040 PRINT AT e,21;CHR$(56+e);"
";g$(e-3)

```







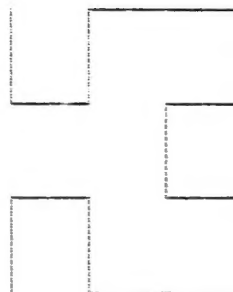
# TRY THIS

```

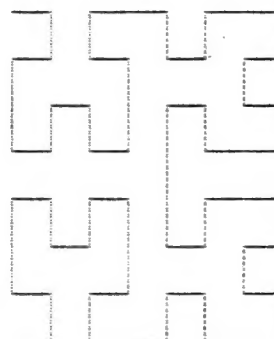
1 CLS      GO TO 1000
2000 *****
2000 HILBERT CURVE
2000 BY MICHAEL DOUGLASS
2000 MOD. FROM 8/88 BYTE
2000 FOR TIME 2000 BY
2000 GEORGE GILDER
2000 *****
100 LET rder=rder-1
110 LET turn=turn
120 LET temp=dy: LET dy=-turn+dy
X: LET dx=turn+temp
130 IF rder>0 THEN GO SUB 100
135 LET S=X: LET T=Y
140 LET X=X+dx: LET Y=Y+dy: PLO
T: GO T
141 GO SUB 500
150 LET turn=turn
160 LET temp=dy: LET dy=-turn+dy
X: LET dx=turn+temp
170 IF rder>0 THEN GO SUB 100
175 LET S=X: LET T=Y
180 LET X=X+dx: LET Y=Y+dy: PLO
T: GO T
181 GO SUB 500
190 IF rder>0 THEN GO SUB 100
200 LET temp=dy: LET dy=-turn+dy
X: LET dx=turn+temp
210 LET turn=turn
215 LET S=X: LET T=Y
220 LET X=X+dx: LET Y=Y+dy: PLO
T: GO T
221 GO SUB 500
230 IF rder>0 THEN GO SUB 100
240 LET temp=dy: LET dy=-turn+dy
X: LET dx=turn+temp
250 LET turn=turn
255 LET rder=rder+1
260 RETURN
270 LET S=X-S: LET T=Y-T: CRAW
280 RETURN
2900 INPUT "Order (1 - 8) = "; rder
3000 LET rder=ABS: PRINT AT 5,1 "HILBERT CURVE"
3100 PRINT AT 5,2 "ORDER" TAB 15; "NO. ";
3200 IF rder=1 THEN PRINT AT 5,3 "HILBERT CURVE"
3300 IF rder=2 THEN PRINT AT 5,3 "HILBERT CURVE"
3400 IF rder=3 THEN PRINT AT 5,3 "HILBERT CURVE"
3500 IF rder=4 THEN PRINT AT 5,3 "HILBERT CURVE"
3600 IF rder=5 THEN PRINT AT 5,3 "HILBERT CURVE"
3700 IF rder=6 THEN PRINT AT 5,3 "HILBERT CURVE"
3800 IF rder=7 THEN PRINT AT 5,3 "HILBERT CURVE"
3900 IF rder=8 THEN PRINT AT 5,3 "HILBERT CURVE"
4000 LET dx=1000/2/rder
4100 LET turn=-1
4200 LET S=0: LET X=0: LET Y=0
4300 GO TO SUB 100
4400 CLEAR : SAVE "hilbert" LIN
4500

```

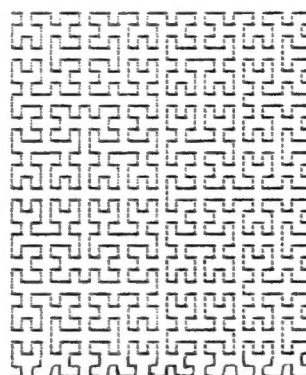
HILBERT  
CURVE  
NO. 1



HILBERT  
CURVE  
NO. 2



HILBERT  
CURVE  
NO. 8



```

5 REM CLOCK
10 LET B=0
20 LET U=0
30 LET A=0
40 LET T=1
50 CIRCLE 84,90,85
60 GO SUB 460
70 FOR N=1 TO 12
80 PRINT AT 10-9*COB (N/6*PI),
10+9*SIN (N/6*PI);N
90 NEXT N
100 PLOT 84,90: DRAW 55*SIN B,5
5*COB B
102 LET A=T/30*PI
105 PLOT 84,90: DRAW 60*SIN A,6
0*COB A
110 FOR U=0 TO 60
120 LET C=U/30*PI
130 LET SX=84+82*SIN C
140 LET SY=90+62*COB C
150 OVER 1: PLOT SX,SY
160 BEEP .01,25: PAUSE 1
170 PLOT SX,SY
180 IF U=60 THEN LET U=0: GO TO
200
190 NEXT U
250 LET A=T/30*PI
260 LET MX=60*SIN A
270 LET MY=60*COB A
280 PLOT 84,90
290 OVER 1: DRAW MX,MY
295 IF T/12=INT (T/12) THEN GO
SUB 340
300 LET T=T+1
310 PLOT 84,90
311 LET A=T/30*PI
312 LET MX=60*SIN A
313 LET MY=60*COB A
320 OVER 1: DRAW MX,MY
330 GO TO 110
340 LET B=U/30*PI
350 LET HX=55*SIN B
360 LET HY=55*COB B
370 PLOT 84,90
380 OVER 1: DRAW HX,HY
390 PLOT 84,90
400 LET U=U+1
410 LET B=U/30*PI
420 LET HX=55*SIN B
430 LET HY=55*COB B
440 OVER 1: DRAW HX,HY
450 RETURN
460 LET xc=84: LET yc=90
470 LET r=82
480 LET d=6
490 LET d=d*PI/180
500 FOR p=0 TO 2*PI STEP d
510 LET x=r*COB (p)
520 LET y=r*SIN (p)
530 LET x=x+xc
540 LET y=y+yc
550 PLOT x,y
560 NEXT p
570 RETURN

```

This program is for the 2068.  
The PAUSE in line 160 is set fa  
st for demonstration purposes; i  
t may be changed to give accurat  
e time

Stanley W. Livingston

```

1 REM "BLACKJACK"
10 DIM P(5)
20 DIM C(5)
30 DIM D(10)
40 LET Q=0
50 LET U=0
60 LET V=1
70 FOR J=3 TO 5
80 LET C(J)=0
90 LET P(J)=0
100 NEXT J
110 GOSUB 360
120 GOSUB 500
130 GOSUB 550
140 GOSUB 500
150 GOSUB 550
160 GOTO 200
170 INPUT A$
180 IF NOT A$="" THEN GOTO 230
190 GOSUB 500
200 IF S>21 THEN GOTO 300
210 IF S=21 THEN GOTO 230
220 GOTO 170
230 LET U=0
240 GOSUB 600
250 GOTO 270
260 GOSUB 550
270 IF T<17 THEN GOTO 260
280 IF T>21 THEN GOTO 340
290 IF T<S THEN GOTO 340
300 PRINT "BOO YOU LOSE"
310 INPUT A$
320 IF NOT A$="" THEN STOP
330 GOTO 40
340 PRINT "WOW YOU WON"
350 GOTO 310
360 FOR J=1 TO 10
370 LET X=RND*52
380 FOR U=1 TO 10
390 IF X=D(U) THEN GOTO 370
400 NEXT U
410 GOTO 430
420 LET X=X-13
430 IF X>13 THEN GOTO 420
440 IF X>10 THEN LET X=10
450 IF X=1 THEN LET X=11
460 LET D(J)=X
470 NEXT J
480 LET K=0
490 RETURN
500 LET K=K+1
510 LET Q=Q+1
520 LET P(Q)=D(K)
530 GOTO 600
540 RETURN
550 LET K=K+1
560 LET U=U+1
570 LET C(U)=D(K)
580 GOSUB 600
590 RETURN
600 CLS
610 LET S=0
620 LET T=0
630 FOR Z=1 TO 5
640 IF U=Z THEN GOTO 670
650 PRINT P(Z),C(Z)
660 GOTO 680
670 PRINT P(Z),C(Z)
680 PRINT
690 LET S=S+P(Z)
700 LET T=T+C(Z)
710 NEXT Z
720 IF U=1 THEN GOTO 750
730 PRINT S,T
740 GOTO 750
750 PRINT S,CHR$ (15)
760 PRINT
770 RETURN

```

